

EXCAVATIONS IN CRETE.¹

SWIMMING in the blue sea of the Gulf of Mirabello (well so named!), on the north coast of Crete, is a solitary isle, the name of which is beautiful in its Greek shape of Pseira, but by no means so lovely



Photo.]

FIG. 1.—Pseira, from Kavou i.

when translated into English, for *ψείρα* means "louse." The polite geographer Kiepert has in his map turned "Pseira" into "Psyra" (which is so much nicer), but Pseira, *Lausinsel*, is its name.

Seen from the west it reminds one of the Bass, but from the heights of the bridle-path leading over the cliffs from Kavousi to Tourni, we see how low and insignificant it really is in comparison with the coast-hills; it looks little more than a long, low shoal. It is barren, and waterless, and no man lives there; only a few goats derive a precarious subsistence from the scrubby herbage which covers a portion of it; the rest is bare rock. Yet this unpromising place was the site, three thousand years ago, of a flourishing settlement of men, in which wealth existed and art was fostered.

Readers of NATURE will remember that some years ago Miss Boyd (the present Mrs. Hawes) excavated for the University of Pennsylvania an ancient Cretan town on the spot which bears the name of *Gournià*, on the mainland not far from Pseira; articles describing her work have appeared more than once in these columns. With her was working a young American archaeologist, Mr. Richard B. Seager, who, after the close of the work at Gournià, excavated a settlement at Vasiliki, on the isthmus of Hierapetra, half-way between Gournià and Kavousi,

which is opposite Pseira. The results of his work at Vasiliki were reviewed in NATURE of September 6, 1906. His next essay was the exploration of Pseira, where certain indications seemed to promise success in digging. Nor were these expectations disappointed. On the small tongue of land which

forms the eastern side of the tiny cove which is the harbour of Pseira (a haven just large enough to hold a couple of caiques), were discovered the remains of an ancient town, with streets of houses descending steeply to the sea. It was a tiny place, though when it was made it was bigger than it seems now, for the land has sunk everywhere along this coast since the old Minoan times, and now the waves wash into the houses. All the ancient Cretan towns of the Bronze age seem to have been small, as was Gournià, judging by our standards, with narrow streets, some five feet broad at most, and cramped houses with tiny rooms.

But their small size was not the result of small ideas or lack of culture. In the ruined houses of these ancient towns have been found treasures of ancient art, of that most ancient art of Greece, the art of the Heroic age, which is older by a thousand years than the "Greek art" of the schools. And waterless, barren little Pseira has yielded objects of art finer than most of those found at Gournià, and hardly inferior to many of those discovered by Dr. Evans at Knossos (though, of course, in much less number). We may instance the relief fresco of the lady or



Photo.]

[H. K. Hall.

FIG. 2.—The ancient town of Pseira, showing the excavations.

goddess published in plate v., and the vases in Fig. 9 and plate vii., of Mr. Seager's report on his excavations, which lies before us.

A cursory glance at these and the other illustrations of the report shows us that at Pseira the best traditions of Knossian art were followed, and it is evident

¹ "Excavations on the Island of Pseira, Crete." By Richard B. Seager. (University of Pennsylvania; the Museum; Anthropological Publications, vol. iii., No. 1.) Pp. 38+19 figures+9 plates. (Philadelphia: The University Museum, 1910.)

that the little island was really wealthier than Gournià, which at the time (about 1700-1400 B.C.) was probably the local provincial capital of the isthmus district. This wealth must have been due to seafaring trade, and probably to a great fishing industry, for agriculture there could be none on Pseira, even if in those days (as seems likely) there were water springs which now have dried up.

Then, about the end of the First Late Minoan Period (about 1500 B.C.), came a catastrophe. The town, which, like other settlements of the Cretan thalassocrats, even on the coast, was undefended by walls and open to attack, was taken, destroyed, and sacked by some unknown enemy. It never recovered, being only occupied for a short time during the Roman period.

To this disaster we owe, as Mr. Seager well points out, the preservation of so many objects of high interest. Gold, silver, and bronze were all looted and carried off; hence the comparative rarity of metal objects. But the fine pottery which is of so great interest to us now as evidence of the culture of its makers was unvalued by sea-robbers, and so, here, as elsewhere in ancient towns which have been destroyed by a catastrophe, we find this pottery and other remains of value to us exactly where it was left by the expelled or destroyed owners, or where the rage of the conqueror cast it forth. "On all sites the period of destruction is the one which leaves the richest harvest for the excavator. As long as a site is in continuous occupation the earlier deposits are only the refuse of breakage and objects which have ceased to be of service to their owners. They are thrown into rubbish-heaps and used as artificial fillings to make even floors over naturally uneven surfaces. Where, as at Pseira, the town was destroyed in the height of its prosperity, with no extensive later settlements to disturb its ruins, the finds are, of course, unusually rich" (p. 10).

I have no space for any critical discussion of technical points of archaeology, but may say that Mr. Seager's description of his finds in this summary report is both able and interesting. The publication is well produced, its plates are admirable, and its line illustrations well and accurately drawn. It is a worthy addition to the series of anthropological publications of the Pennsylvania University Museum, of which it forms the first number in the third volume. Soon we hope to see a similar report on Mr. Seager's later and still more interesting discoveries at Mokhlos, another isle, east of Pseira, where tombs have yielded gold treasures like those of Trov, and as old. Mr. Seager is to be congratulated on his admirable contributions to the great work, important and useful alike to science and to art, which is being carried out by the excavators of ancient Crete.

H. R. HALL.

THE LEAD GLAZE QUESTION.¹

THE report referred to below is the outcome of the deliberations of a committee appointed by Lord Gladstone in May, 1908, to consider a question which has engaged the attention of the Home Office and Parliament for several years past, and has already been the subject of inquiry by several departmental committees. It is a matter of common knowledge that persons engaged in the making of earthenware and china are subjected to considerable risk to health from two main causes—dust and lead. The

¹ Report of the Department Committee appointed to inquire into the Dangers attendant on the use of Lead and the Danger or Injury to Health arising from Dust and other Causes in the Manufacture of Earthenware and China and in the Processes incidental thereto, including the Making of Lithographic Transfers. Presented to both Houses of Parliament by Command of His Majesty. Vol. i. Report. Pp. vii + 150. (London: H.M.S.O., 1910.) Price 1s. 5d.

dust arises from the finely-divided silicious matter, mainly ground flint, employed in various stages and processes of ceramic manufacture; this when breathed gives rise to distressing bronchial and lung troubles, and in an aggravated form leads to the malady known as "potter's rot."

The danger arising from dust may be largely obviated by the use of mechanical and other appliances whereby the operative is prevented from inhaling the dust-laden atmosphere. By the more general use of exhaust-fans or other suitable ventilating machinery, and by the employment of respirators, cases of "potter's rot" are less frequent now than formerly. At the same time much remains to be done by a more stringent application of these remedial measures. It was only in 1894 that the Home Office issued the first code of special rules dealing with dusty processes. The evil is patent and notorious; it is, however, not very satisfactory to be told that we must wait for the statistics of 1920-2 before we can estimate the real value of these special rules. If public opinion moved as fast on the dust problem as it has on the lead question, we should not have to wait ten or twelve years before this crying evil was absolutely stamped out, and "potter's rot" become as much a thing of the past as "phossy jaw."

It is, however, mainly to the dangers attendant on the use of lead in pottery manufacture that public sentiment has been roused, and it has been largely in deference to this feeling that the several departmental committees above alluded to have been appointed. It is only by "pegging away" in this manner that such amelioration as has been secured has been reached.

The pottery industry in this country is mainly centred in North Staffordshire. Of the 63,000 workers in the 550 factories scattered throughout the United Kingdom, 48,000 are employed in the 329 "pot-banks" in the district known as the "Potteries." Owing to special circumstances, arising largely from local conditions of employment, no systematic attempts to grapple with the evil of lead poisoning have been made by the manufacturers as a body. Individual firms, with intelligent management, have succeeded in minimising the mischief, but the laxity of other firms has at times more than neutralised the benefits which have been secured by the more general adoption of the precautionary measure which common-sense seemed to indicate and experience has shown to be adequate. The manufacturers as a body have, in fact, been content to wait until outside pressure has forced them into action, mainly by rules and regulations issued by the Home Office, and based on the suggestions or recommendations of departmental committees appointed *ad hoc*.

The committee which has now reported has gone over much of the ground already traversed by its predecessors, or which occupied the attention of those engaged in the prolonged arbitration under Lord James, leading up to the special rules of December, 1903. But it cannot be said that any real progress has been made. Although it has been established that a large amount of earthenware can be made without the use of lead in any form, and even in the cases where lead must be used, it has been proved that the lead may be so combined that it is practically innocuous, the manufacturers as a body have hitherto resisted any attempt to prescribe a schedule of articles which should be made with leadless glaze, or to bind themselves to use glazes in which the lead is in an innocuous form. They, in fact, demand unrestricted liberty to use any materials they think necessary for their purposes. The loud cry of "foreign competition" is sufficient to drown the still, small voice of pity raised on behalf of the workers.